

**LVDS output levels for the
UT200SpW4RTR SpaceWire Router**

Table 1: Cross Reference of Applicable Products

| Product Name: | Manufacturer Part Number | SMD # | Device Type | Internal PIC* |
|-------------------------|--------------------------|--------------|-------------|---------------|
| 4-PORT SPACEWIRE ROUTER | UT200SpW4RTR | NA Note 1 | NA | WD41A |

Note 1: WD41A will not be sold against the SMD. All SMD shipments will be with Rev B Silicon.

*PIC = Product Identification Code

1.0 Overview

The UT200SpW4RTR 4-Port SpaceWire router contains an anomaly that prevents the device from complying with the Low Voltage Differential Signaling, LVDS, levels called out in ECSS-E-ST-50-12C Section 6.1. The SpaceWire Standard calls for a LVDS physical layer as defined in ANSI/TIA/EIA-644, Electrical Characteristics of Low Voltage Differential Signaling Interface Circuits. Revision A of the Aeroflex router does not comply with the levels called out for Differential Output Voltage (V_{OD} or V_T) and Offset Voltage (V_{OS}) sections 4.1.1 and 4.1.2 in ANSI/TIA/EIA-644. Additionally the UT200SpW4RTR does not show in family characteristics for High-Level Output Voltage (V_{OH}) when compared to other Aeroflex LVDS and SpaceWire products.

Table 2 below shows the Differential Output Voltage, Offset Voltage, and High-Level Output Voltage comparison between Revision A and the targeted Revision B limits for the UT200SpW4RTR.

| SYMBOL | Parameter | Rev A | | Rev B | | Units |
|----------|-----------------------------|-------|------|-------|-------|-------|
| | | MIN | MAX | MIN | MAX | |
| V_{OD} | Differential Output Voltage | 362 | 434 | 250 | 400 | mV |
| V_{OS} | Offset Voltage | 1.38 | 1.53 | 1.125 | 1.450 | V |
| V_{OH} | High-Level Output Voltage | -- | 1.75 | -- | 1.625 | V |

Table 2. Anomaly comparison table between Rev A and Rev B of the UT200SpW4RTR

2.0 Corrective Action

This anomaly can not be prevented.

3.0 Rev A vs. Rev B

Revision A of the UT200SpW4RTR contains this anomaly. Revision B will correct this errata.